



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,134	02/06/2006	Masahiko Igarashi	025416-00026	4553
4372	7590	05/28/2009		
ARENT FOX LLP 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036				
EXAMINER				
GARCIA, ERNESTO				
ART UNIT		PAPER NUMBER		
3679				
NOTIFICATION DATE		DELIVERY MODE		
05/28/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com

IPMatters@arentfox.com

Patent_Mail@arentfox.com

Office Action Summary

Application No.

10/567,134

Applicant(s)

IGARASHI ET AL.

Examiner

ERNESTO GARCIA

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2009 and 07 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6,15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-6,15 and 16 is/are rejected.
- 7) ☒ Claim(s) 1,4-6,15 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 7, 2009 has been entered.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Drawings

The drawings were received on April 7, 2009. These drawings are accepted. However, the drawings still contain discrepancies and not all drawing objections have been overcome.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "22" has been used to designate both a shaft with a first

configuration (Figure 3) and another shaft with another configuration (Figure 4; slanted first step region with a smaller angle; page 5, lines 19-21). Note that these shafts are not the same to be designated with the same reference character "22". The simple rule is to designate the same part with the same reference character. Also note that the shaft shanks 24 are different. The one in Figure 3 is slanted while the one in Figure 4 is not. The same applies to Figure 5 with respect to the shaft as this is a different shaft than those found in Figures 3 and 4.

The drawings are objected to because in reviewing Figure 2A and 2B, it is unclear why the splines on the hub are closer together as compared to those in Figure 2A. Figure 2B shows the splines of the hub being closer than those in Figure 2A and thus the examiner questions what is going on with the splines on the hub. It seems that the right peak 28a is stationary while the left peak 28a is moving. Obviously this does not occur in reality. Further, the drawings should identify the tooth thickness, in particular, the maximum tooth thickness at the crowning top, as claimed in claim 5. Note that this objection has not been addressed.

Figure 2B contain extraneous text and should be deleted. Further, it is unclear why the loads a-c overlap and drawn with circles. Shouldn't these be depicted with regions? Note that this objection was partially corrected in the response filed on September 24, 2008 and is now being reiterated since Figure 2B has been reverted to the original figure. Applicants remark, on May 1, 2009, that the text associated with

references a, b, and c has been removed. In response, this is not accurate as Figure 2B as filed on April 7, 2009, which replaces the previous version, still shows the text.

The drawings are objected to because one of the reference character 28 in Figures 2A and 2B should be deleted as there is only one hub tooth section in the hub. Note that Figure 1 makes reference to one hub tooth section 28 as a whole. The plane upon which sectional view, Figure 2A, is taken should be indicated on the view from which the section is cut by a broken line. The ends of the broken line should be designated by Arabic or Roman numerals corresponding to the view number of the sectional view, and should have arrows to indicate the direction of sight. See 37 CFR 1.84(h)(3) and MPEP 608.02(e).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended". If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

Claims 1, 4-6, 15, and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, there is an inconsistency between the language in the preamble and a certain portion in the body of the claim, thereby making the scope of the claim unclear. The preamble clearly indicated that the mechanism is "for transmitting torque between a shaft and a hub". However, the body of the claim then positively recites "the hub" and "the shaft", e.g., "a shaft tooth section formed on the shaft" (line 3) and "a hub tooth section formed on the hub" (line 4), which indicates that the claims are being drawn to a combination of the "mechanism" and both "the shaft" and "the hub". Accordingly, is the combination or subcombination being claimed? Appropriate correction, clarification, or both is required. For this Office action, the examiner has assumed the hub and the shaft as being part of the mechanism in view of their positive recitation.

Regarding claims 4-6, 15, and 16, the claims depend from claim 1 and therefore are indefinite.

Allowable Subject Matter

Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 4-6, 15, and 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

regarding claim 1, the prior art of record does not disclose or suggest a mechanism including a first starting point of a first step region of a shaft tooth valley being offset from a second starting point of a second step region of a hub tooth section (lines 23-24) in combination with a valley of the shaft tooth having different diameters (lines 15-16) and the peak of the hub including two peak portions having different inside diameters (lines 19-20). The closest prior art, Beigand, 6,142,033, teaches the first starting point and the second starting point axially aligned. Further, there's no

Art Unit: 3679

motivation to modify Beigang, 6,142,033, without given the applicants' own disclosure; and,

regarding claims 4-6, 15, and 16, these claims depend from claim 1.

Response to Arguments

Applicants' arguments with respect to claims 4-6, 15, and 16 have been considered but are moot in view of the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 571-272-7083. The examiner can normally be reached from 9:30AM-6:00PM. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached at 571-272-7087.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 3679

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/E. G./

Examiner, Art Unit 3679

May 26, 2009

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679